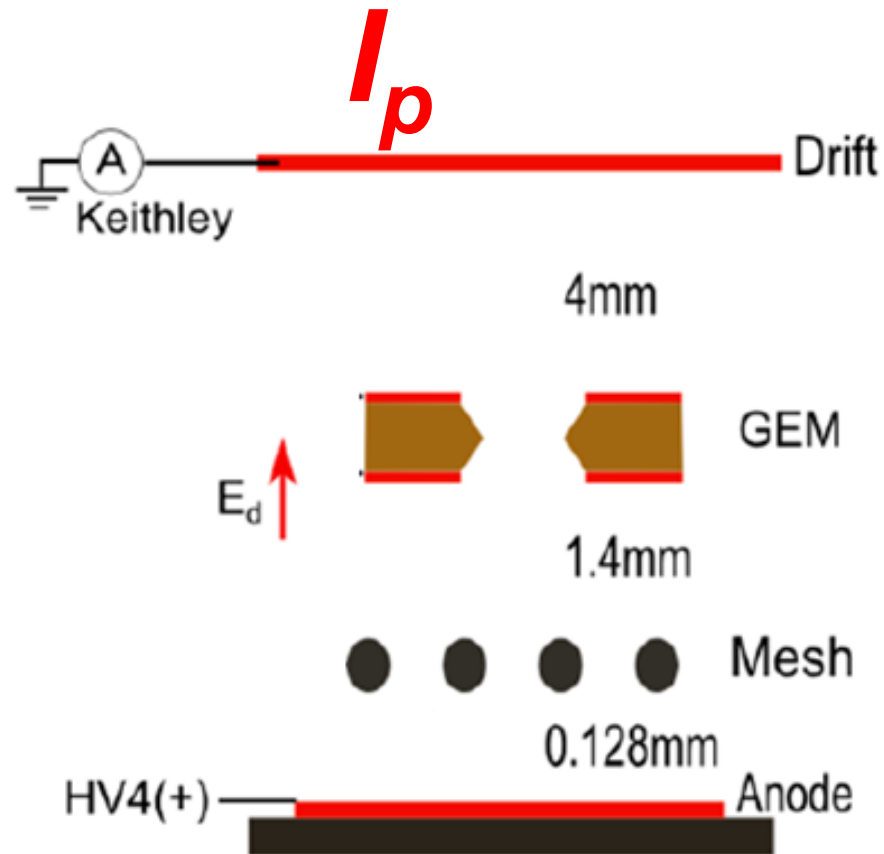

Outline

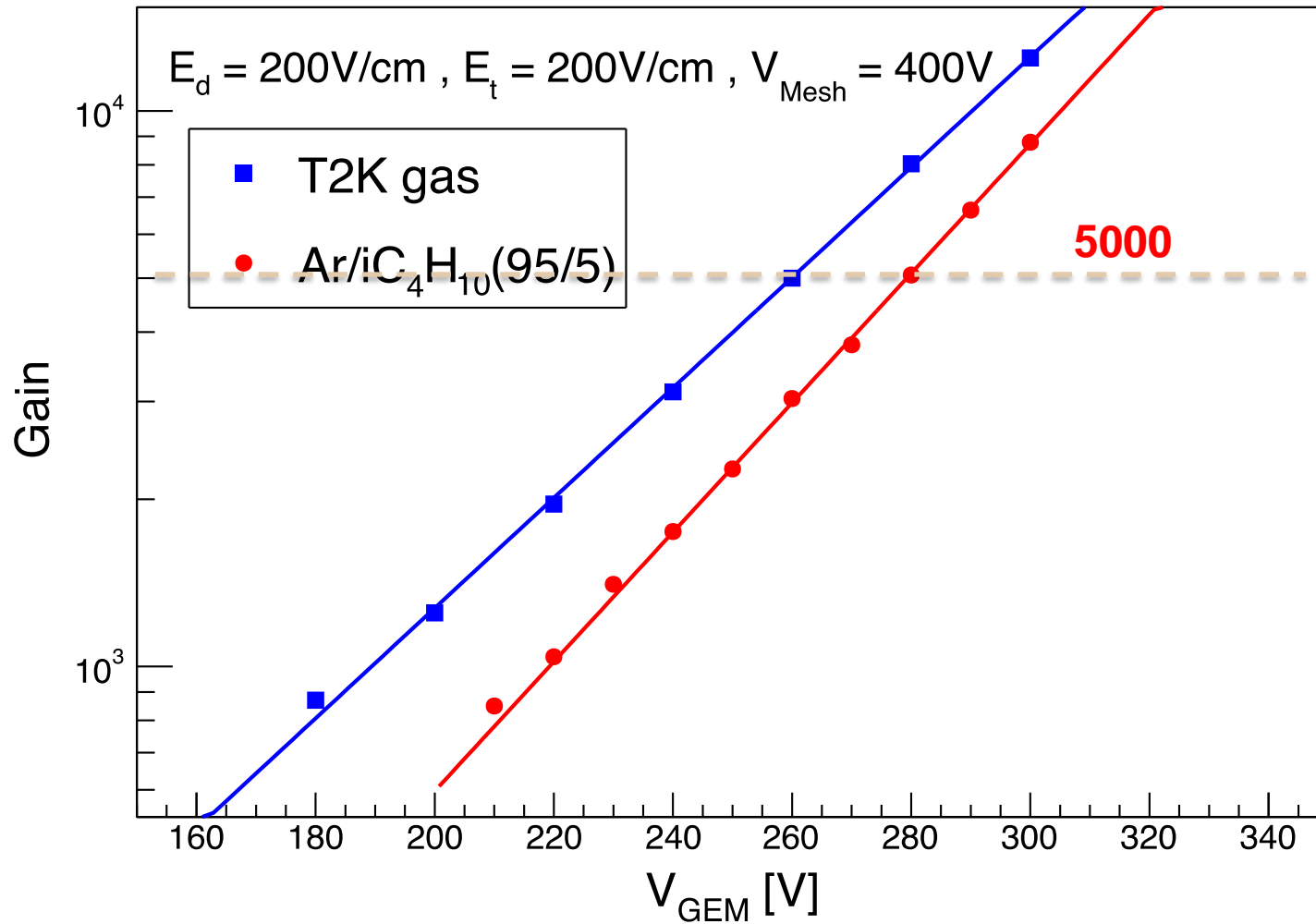
- Status of TPC module R&D
- Status of TPC prototype R&D

Primary electrons current - I_p

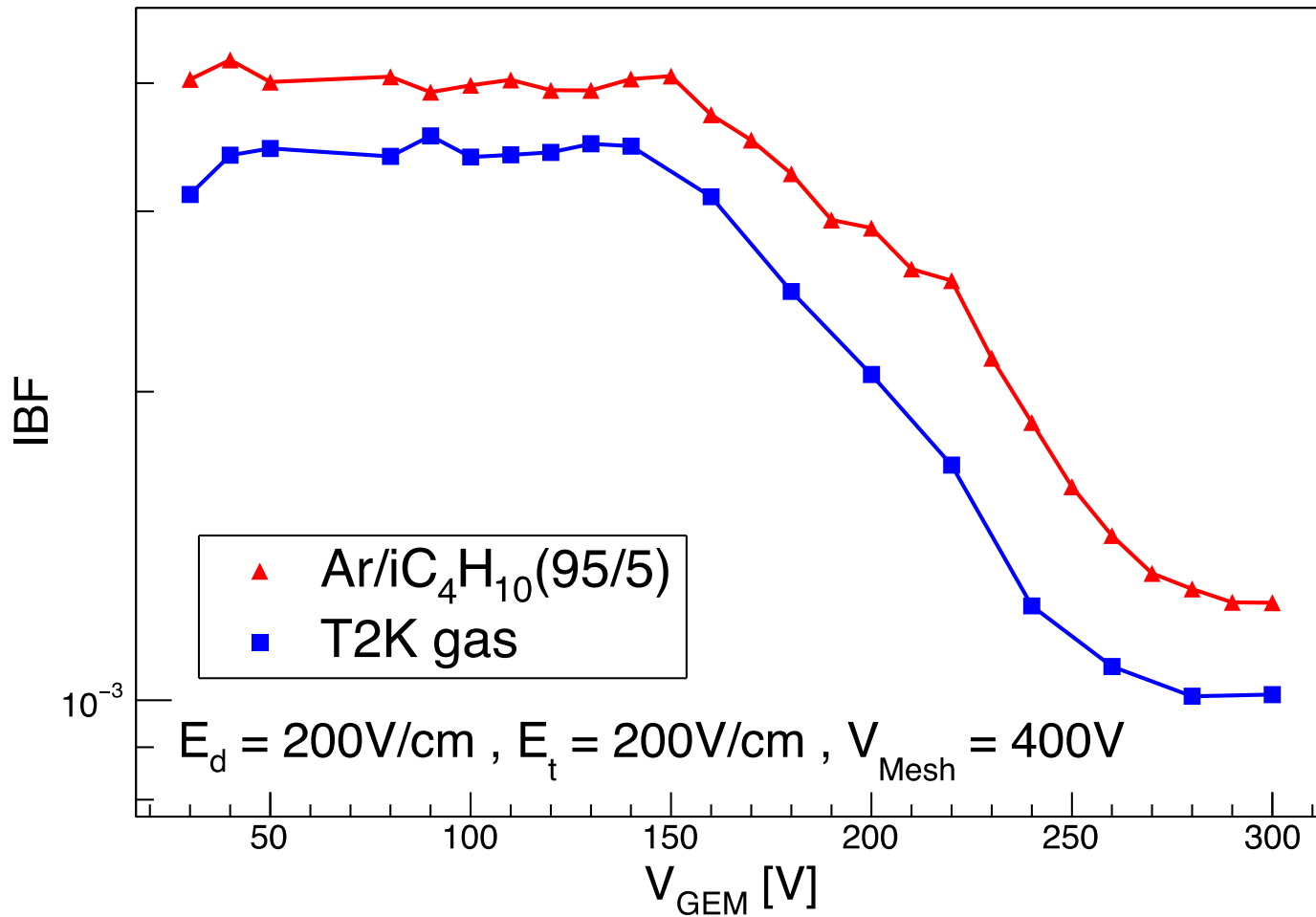


- No operation voltage of the GEM-MM detector
- Just test current of the primary electrons (\sim pA)

Gain of the hybrid structure detector

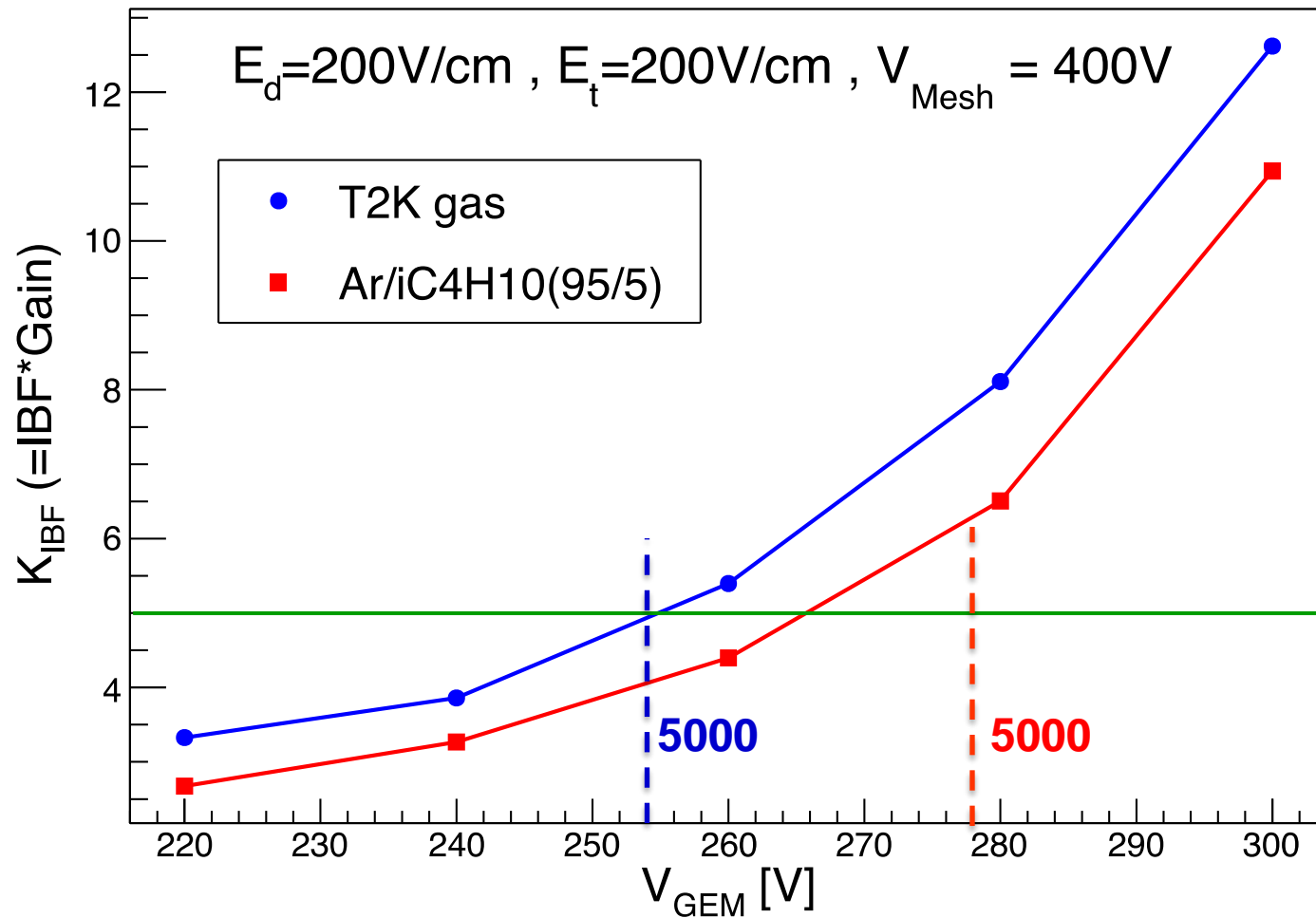


Optimization with V_{GEM}

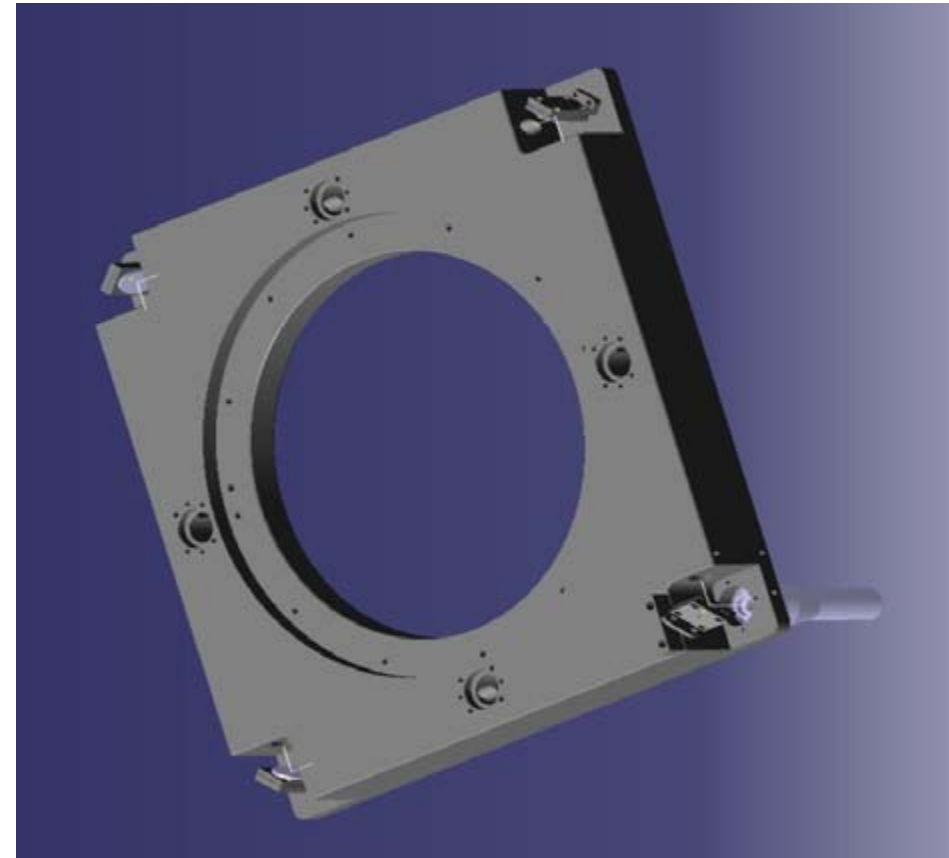
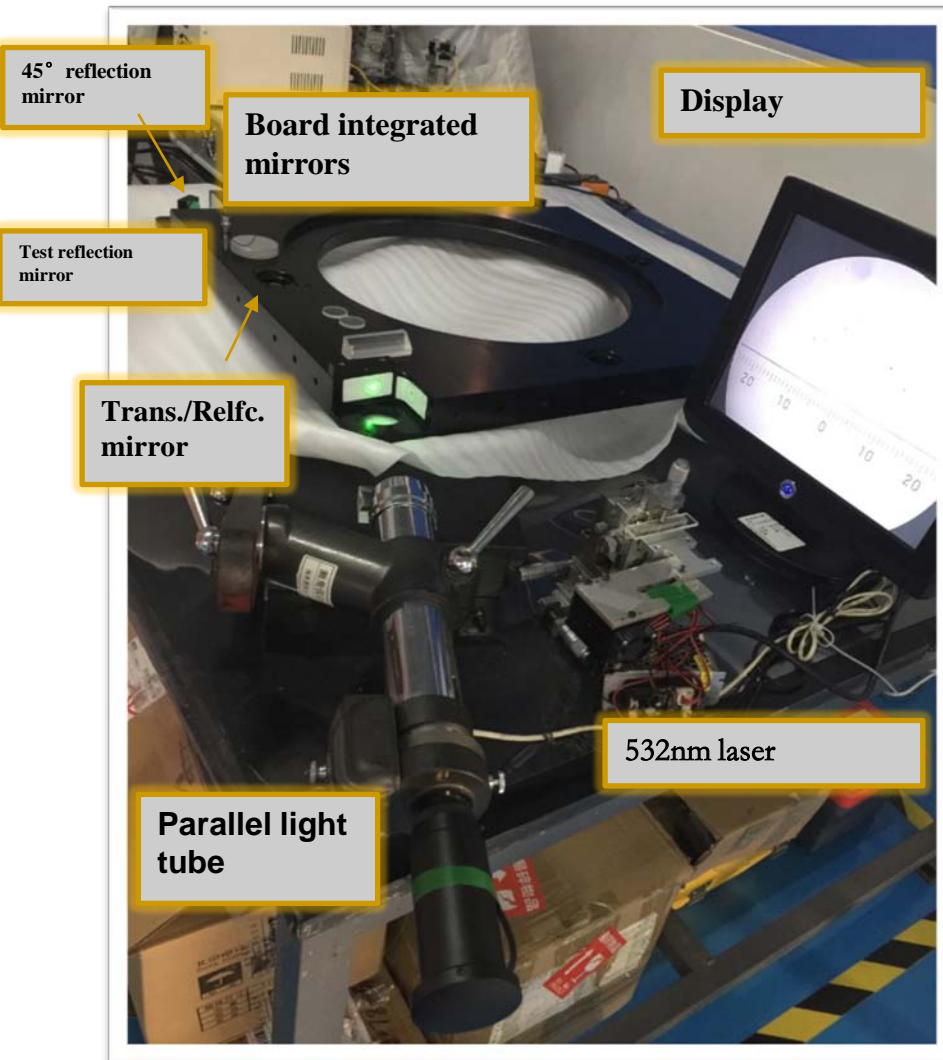


- T2K gas@ $V_{\text{GEM}}=260\text{V}/V_{\text{mesh}}=400\text{V}@E_t/E_d=1$
- IBF reaches 1.07‰

Key IBF factor: $IBF \times Gain$

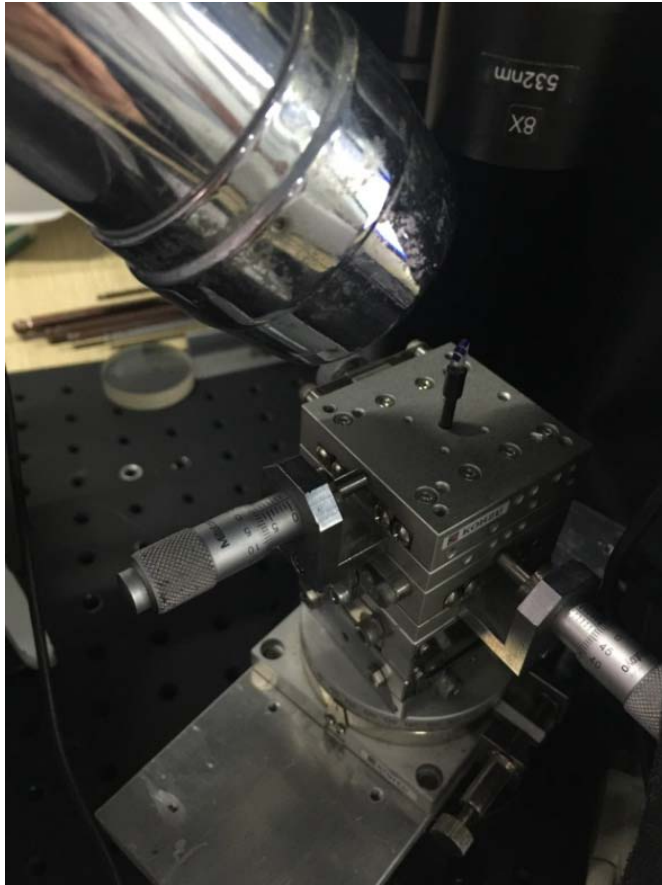


Test of mounted board integrated mirrors



Laser splitting mirrors

Angle accuracy: $\sim 1/60$ degree
1 minnte



Design of the prototype with laser



- ❑ Support platform: 1200mm×1500mm (all size as the actual geometry)
- ❑ TPC barrel mount and re-mount with the Auxiliary brackets
- ❑ Readout board (Done), Laser mirror (Done), PCB board (Done)